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AGRICULTURAL MARKETING

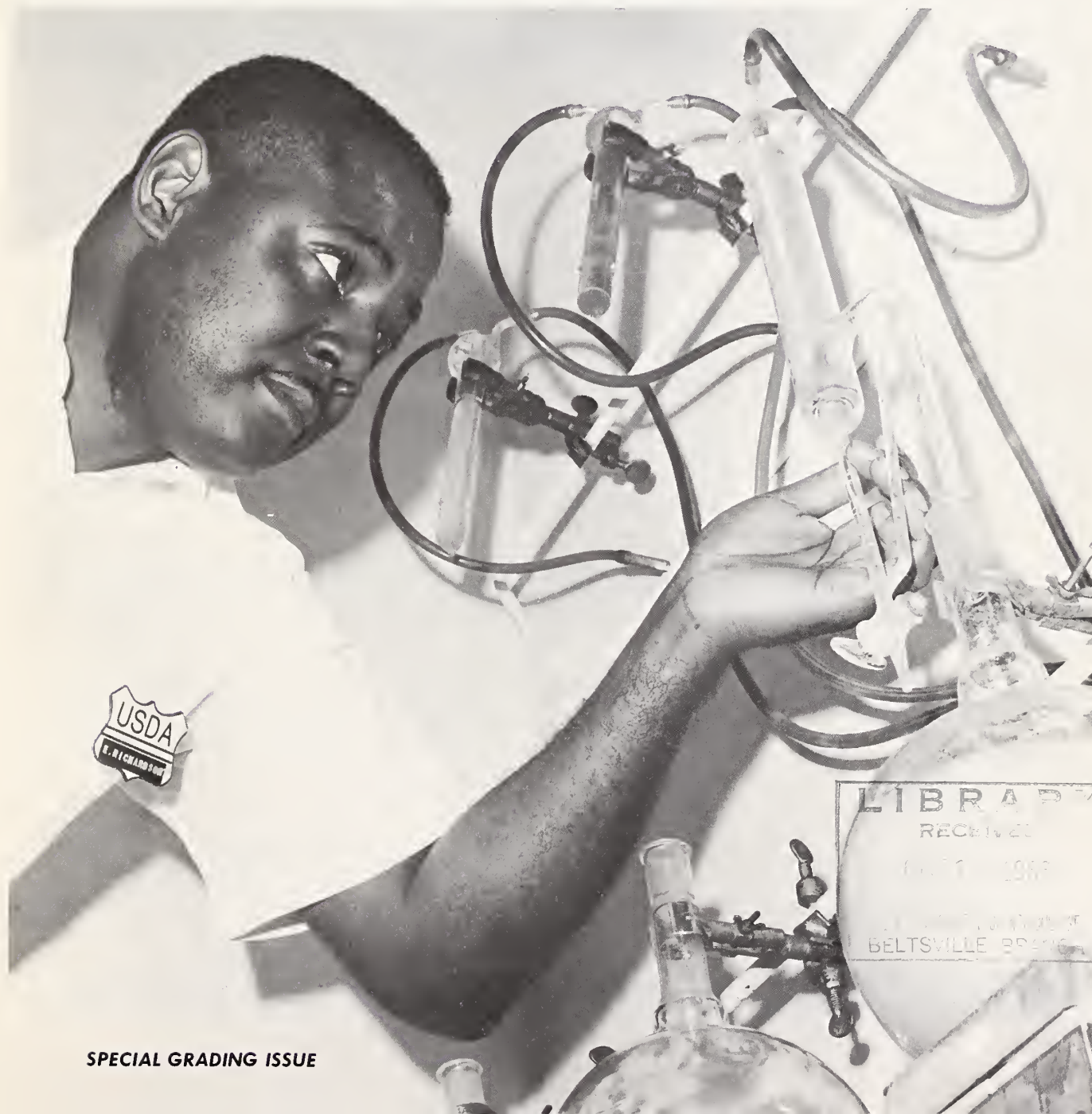


OCTOBER 1966

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SPECIAL GRADING ISSUE

THE PLACE OF GRADING

By S. R. Smith
Administrator, C&MS

STANDARDIZATION MAKES OUR way of life possible.

It began shortly before the Civil War when the manufacture of rifles with interchangeable parts ushered in the era of mass production. Today, manufactured products are turned out by the millions, each exactly like the other down to the thousandth of an inch.

Farm products, however, cannot be "manufactured" to close tolerances.

To fit into an age of mass production and mass marketing, they must be sorted into uniform groups *after* they're produced. The sorting process is what we call grading.

Grading can be done by anyone. Many marketing firms classify the product they handle to suit their purposes—frequently on the basis of U.S. grade standards.

But even though the U.S. grade standards provide measures of quality which are known, understood, and accepted throughout the country, they lose much of their value unless they are interpreted accurately and applied consistently.

That is exactly why there is widespread use of the grading services provided by the Consumer and Marketing Service of the U.S. Department of Agriculture. These grading services are often operated cooperatively with State departments of agriculture, but training and supervision of the graders remain under the control of C&MS so that there will be nationwide uniformity in the grading.

Since the marketing system for farm

products in this country is now—almost without exception—a national system, the need for nation-wide uniformity in grading is self-evident.

Federal law requires grading of most grain, cotton, and tobacco. But for all other commodities, grading services are provided on a voluntary basis. Users must request and pay for the service.

Last year, commercial firms paid the Federal-State grading services nearly \$28 million for the grading of billions of pounds of food, including more than four-fifths of the fed beef produced, two-thirds of the ready-to-cook poultry, one-fifth of the shell eggs, more than half of the butter, cheese, and nonfat dry milk, about three-fourths of the frozen fruits and vegetables, and enough fresh fruits and vegetables to fill more than a million railroad cars.

Use of the Federal-State grading services has become so much a part of today's food merchandising that it is just about taken for granted. A representative of a national food chain made this point not long ago when he said, "One of the most important factors in the development of our present food distribution system is often forgotten. That is the part played by the grading system operated by the U.S. and State departments of agriculture. Without this, much of the advancement would have been impossible." To procure supplies from a broad area, he explained, and to obtain uniform quality, "large firms need nationally uniform quality standards and disinterested third party grading."

But, of course, the Federal-State grading services are equally valuable, if not more so, to small firms. A small meat-packer in the Midwest, with no big advertising budget, for example, finds a ready market for his U.S. Choice beef carcasses because buyers know and trust the official grade mark on the meat. The grading service enables the small businessman to provide the same quality of product, the same guarantee, and furnish the same delivery of goods as a large firm.

And grades and grading are of particular value to farmers, who generally are not as skilled in judging quality as are buyers. It lets them ship to distant markets with confidence that they will receive payment commensurate with the value of their product.

Consumers benefit especially whenever foods sold at retail carry the U.S. grade mark. They can buy a number of foods, such as beef and eggs, by grade.

Who benefits from grading? This is a proper question, but it is like asking who benefits from a highway—the person who travels on it or the person served by it?

Grading is of direct benefit to the parties immediately involved. It is virtually essential to many processors, wholesalers, and retailers.

It is of indirect benefit to the entire marketing system, including consumers. That means all of us. For it makes the marketing system work better, and all persons served by that system are beneficiaries.

ORVILLE L. FREEMAN
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Cover Page

U.S. Department of Agriculture food grader makes a laboratory test of orange juice to determine its citrus oil content. Orange juice—as well as several other commodities—may bear a USDA shield to give you a recognizable assurance of quality. See pages 8-9.

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GRADING OVER THE YEARS —From Assizes to U.S. Grade A

By Roy W. Lennartson,
Associate Administrator, C&MS

QUALITY MEASUREMENT IS A comparatively modern development.

Man has been measuring sizes and distances—more or less accurately—since the dawn of recorded history (in ancient Egypt, the length of the Pharaoh's foot was an official measurement). But the question of quality measurement did not appear until the last few hundred years.

Consumers in 13th century England probably got the benefit of the first real quality standards when the king decreed "assizes" for bread. These assizes were similar to the "standards of identity" which the Food and Drug Administration issues today on a wide variety of products. They were enforced by local officials to make sure that bakers gave full quality and weight in the loaves.

Under the assize, "simnel loaves" had to be made from the finest white wheat flour. "Treet bread" was brown bread, probably fairly close to the simnel loaf in quality. There was also a "wastel loaf", far inferior to the first two types. "Horse bread" was made from beans, and seems to have been sold primarily to unwary travelers at the local inns. The prices of the loaves were fixed, and the required weight of each type was varied according to the price of grain. The standards weren't too exact, and local officials served as "graders" when there was a dispute.

Violating the assizes was serious, particularly if the common people were being victimized. There were similar assizes for such products as wine, candles, pepper, and many manufactured articles.

Here in America, the earliest market standards were those brought from England, during the colonial period. Most of the colonies had an assize of bread, for instance. A Massachusetts act of 1646 fixed the weight of penny loaves of three different types of bread—white, wheaten, and household—according to the price of wheat.

But grading as we know it today is unique to the 20th century. During the early 1800's there were no official standards—and the watch-word of the day was "let the buyer beware." As cities swelled in size, however, and long-distance marketing grew, the need for standards became more and more apparent. Farmers became concerned about short weights and under-grading. Dealers were frustrated by the wide variations in quality of products. Consumers were often, in effect, buying "a pig in a poke."

In an effort to improve the situation, individual firms and trade organizations adopted various systems of grading. These were neither uniform nor understood throughout the country. But they were better than nothing.

Buyers and sellers were often many miles apart, and they needed some way to describe accurately the quality of their goods before they would agree on price. As commodity exchanges developed, they needed a way to be sure that contracts would be fulfilled. Lending agencies needed to know the market value of farm products that were offered as loan collateral.

Several State Experiment Stations were among pioneers in drawing up grade standards suitable for general use. The first step toward establishing official national standards was taken in 1907, when Congress voted money to the U.S. Department of Agriculture to study U.S. standards for farm products. The first official standards were issued in 1909, for cotton. However, there were still no official graders to interpret the standards.

The grading service itself had to wait until World War I. Then, with the country facing an all-out drive to produce more food and fiber and to supply large quantities to the armed forces and the Nation's allies, the Food Administration saw the need for an official inspection agency that would handle disputes between buyers and sellers.

It was called the Food Products Inspection Service, and was available on request on a fee-for-service basis. Producers, shippers, and receivers soon began to appreciate the practical value of an inspection service operated under uniform procedure in the different markets. Demand for the service grew rapidly.

Ever since—and with World War II giving a second impetus—the needs of the increasingly commercial marketing system have led to wide use of the grading service.

Today, more than 8,000 Federal and State graders work under the coordination of USDA's Consumer and Marketing Service. They make impartial, official grading available in all 50 States of the union. They grade millions of tons of food and fiber every year—grain, cotton, meat, fruits and vegetables, tobacco, farm products of all kinds.

You find evidence of their work almost everywhere you turn . . . the U.S. Choice on your roast was put there by a grader. So was the U.S. Grade A shield on your eggs and butter, and on that package of frozen peas. The U.S. Grades are guides to quality. They make buying and selling easier and more efficient—whether you're a processor buying hundreds of tons of food for a processing plant—or a consumer buying food for one family.



STANDARDS

WHAT THEY MEAN AND HOW THEY'RE USED



IF GRADES ARE THE LANGUAGE of modern trade in farm products—as they are often said to be—then standards are the dictionary that gives definition and meaning to that language.

Standards describe the difference between Choice and Good beef, Grade A and Grade B turkey, Good Middling and Strict Middling cotton.

Since standards are necessary before it is possible to have a grading service, standardization—the process of drawing them up—is an essential function of the Consumer and Marketing Service of the U.S. Department of Agriculture. U.S. standards have been issued for more than 300 farm products.

This work is done by standardization specialists who are experts on one or more commodities. Using scientific techniques, they carefully define the characteristics that describe each grade. They make laboratory studies to find ways of measuring the physical differences in quality, and economic studies to determine the attributes that are important to sellers and buyers—including the final consumers.

Although tailored to each product, the standards are in general based on

By George R. Grange

those factors that determine usefulness, desirability, and value—in a word, marketability. These are factors such as color, yield of edible product, eating quality (tenderness, flavor, texture), and condition (ripeness, freshness, defects).

And for each product, the standards provide a means of classifying its entire range of quality. Because some products are naturally more variable than others, it's necessary to have more grades for

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them than for others. For example, while it takes eight grades—from U.S. Prime to U.S. Canner—to span the range of beef quality, only three grades are needed for poultry, U.S. Grades A, B, and C. At the other extreme is tobacco—there are from 20 to 150 grades for each of the various types.

The standards must be prepared in terms that can be easily understood and uniformly applied, because most grading is a subjective process—that is, the application of the standards depends

upon a judgment decision by the expert grader.

It would be ideal if grade standards could always be expressed in terms that can be measured mechanically. And much progress *has* been made toward using mechanical devices in grading. The colorimeter is an early example, the micronaire test for cotton a recent one. New mechanical means for measuring quality are constantly being developed, both by USDA and industry researchers, and we can expect a great deal more along these lines in the years ahead.

Even so, C&MS standardization specialists will still need to work, as they have in the past, to keep the standards up to date by revising them to keep pace with changes in production, trading, and use. Present trends in merchandizing of food, for example, are demanding more precise and narrow definitions of quality. In some instances, changes in processing are altering the kind of raw product that is preferred.

But however apparent the need, adopting a change in standards is not always easy. Proposals for new or revised standards often result in pro-

Models of processed fruits and vegetables are used by graders throughout the country to interpret standards for various grades of processed products.



longed—and sometimes bitter—debate. Inasmuch as vital economic interests are at stake, this is to be expected. Yet it is essential that standards keep pace with the times and that the difficulty of the moment in modifying them not be viewed as an impassable roadblock.

For USDA standards are the foundation of competitive trade in farm products. Although they are basic to the Federal-State grading service, their use is by no means confined to official grading. Wherever grade names are utilized in trade, it can be said that grade standards are in practical use. Without the universally understood language of official grades, trade by description across this vast nation would be indeed difficult if not impossible. At the very least, it would be much more costly.

Moreover, Federal grades make it possible for the Federal-State market news service to report on supplies and prices of the day or the hour, at many different markets, in terms that permit accurate comparisons between markets and over periods of time.

A great many processors and packers employ Federal grade standards in their internal quality control programs. And price supports for corn, cotton, and other products are pegged to the official grade standards.

Here, in brief summary, are some of the criteria on which grade standards for several important products are based:

Beef—Quality grades are based on “eating quality” and conformation. Eat-

ing quality is indicated by maturity and by the quality, firmness, texture, and marbling of the meat.

Yield grades (1 through 5) for beef indicate the differences in cut-out yield of retail cuts. Keys to yield are the thickness of the fat covering over the rib eye, size of the rib eye muscle, and amount of internal carcass fat.

Poultry—Standards measure “table quality” in terms of the proportion of edible meat in relation to bone, the “finish” of the bird, and freedom from defects such as cuts, tears, and bruises. Tenderness is not a grade factor, as it relates chiefly to the age difference between young and older birds and is indicated separately in labeling (for example, “fryers”).

Eggs—Standards provide for two kinds of grade—quality and size. Standards for quality relate to the appearance of the egg and its suitability to various methods of cooking. They define such factors as thickness of the albumen (white), size and position of yolk, and condition of the shell. Standards for size are based on the weight of a dozen eggs—they provide a three-ounce weight difference between sizes.

Butter and Cheddar cheese—Standards define levels of eating quality. They are based on factors of flavor, texture, and body. In the case of cheese, age or degree of cure is also a factor which affects the other quality characteristics. For example, to rate the top grade, a sharp (aged) cheese is required to have a smoother, waxier texture and a higher degree of flavor development than a mild

(young) cheese.

Fruits and vegetables—Standards for both fresh and processed fruits and vegetables vary with the individual product. The standards usually define such factors as color, shape, size, maturity, and number of defects. For some products, flavor and tenderness are rated also. In many cases, the lower grade may be just as tasty and nutritious as the higher grade, but have an inferior appearance or more waste, or be less desirable for other reasons.

Grain—Standards, although varying by kind of grain, in general provide measures of those factors which affect the quality and quantity of products that can be produced. Standards for wheat, for example, set out for each grade minimum test weights per bushel and limits for other factors, such as moisture content and foreign material (weed seeds, chaff, and straw).

Cotton—Standards are based on quality factors which indicate to a large extent the kind of yarn or cloth which can be made from cotton fibers and hence the market value of lint cotton. Three major factors which determine quality are:

(1) Grade, which is determined on the basis of color, trash (amount of foreign material), and preparation (smoothness of ginning); (2) staple length (length of fibers); and (3) micronaire reading (fiber fineness and maturity).

Tobacco—These standards also are tied to the quality sought in the final product. Factors include maturity, leaf structure, color, uniformity, and thickness of leaf.

What Makes A Grader?

THE NEARLY 4,000 persons who work as Federal graders for the U.S. Department of Agriculture's Consumer and Marketing Service are thoroughly-trained experts in food quality. They have to be; it's their job.

The Federal grader, whether he works with meat, poultry, fruits and vegetables, etc., has received the necessary training in his commodity field to make him an expert on its quality. Training includes classrooms, on-the-job, and refresher courses to keep the graders up-to-date.

For instance, C&MS recruits two types of meat graders: (1) qualified meat graders who have had considerable grading experience in the industry and (2) persons with college backgrounds in animal husbandry and meat judging, who are hired as trainees.

A meat grader trainee receives an intensive six months of on-the-job train-

ing. During this time, he is stationed at three or more important livestock marketing and meat packing centers, where he practices actual grading under the close supervision of an experienced grader. He learns to evaluate individual grade factors and combine them into a final grade. As his training progresses, he is given more difficult assignments with less supervision.

The meat grader trainee also has classroom training. He learns the history and the theory of the grade standards and their importance to the industry and to the consumer. He finds out how new grade standards are developed and older ones revised.

The trainee also learns the operation of auction markets, stockyards, and other livestock marketing facilities, and becomes acquainted with all areas of work in the Livestock Division.

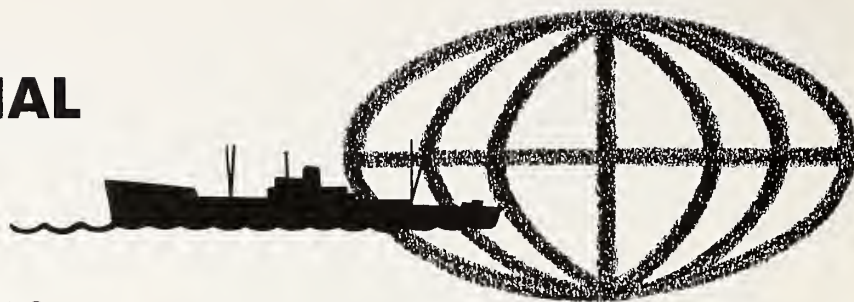
A meat grader receives continuous supervision throughout his career. This supervision is necessary to assure uniform, nationwide interpretation of the grade standards. Because of this the consumer can be assured that U.S. Choice grade meat is the same in Portland, Oregon as it is in New York City.

The Livestock Division, as do the other C&MS commodity divisions, sponsors refresher classes for working graders. These classes are designed to keep qualified graders informed on the latest changes in grading methods.

This training is typical of the intensive preparation which all Federal graders undergo. Through such a comprehensive program of on-the-job and special training, the Federal grader becomes a skilled specialist serving the industry and the public as well.

AN INTERNATIONAL FOOD CODE

TO END TRADE BARRIERS



FOR MORE THAN 50 YEARS, farmers, marketers, and consumers in this country have had nationally uniform U.S. standards to use as the basis for trade in food products. Now, there is an international movement in full swing to establish standards for foods which will benefit producers, traders, and consumers everywhere.

Next month, delegates from about 40 countries, including the United States, will meet in Rome at the 4th General Session of the Codex Alimentarius Commission—an international body operating under the auspices of the United Nations and charged with the responsibility of developing and establishing international standards for foods. The purpose of these food standards is to protect the consumer's health and facilitate world trade.

In essence, what is accomplished at the Rome meeting in November—together with what has been accomplished at past meetings and will be accomplished at future ones—will help consumers around the world to buy foods from other countries with confidence. Producers will benefit because they will not have to compete against inferior or falsely labeled products.

Pioneering work in the field of developing international food standards dates back to 1958 when the European Council of the Codex Alimentarius was formed. It soon became evident, however, that the work of this Council should not be confined to a regional group. As a result, the Codex Alimentarius Commission was formed under two wings of the United Nations—the World Health Organization and the Food and Agriculture Organization. The first WHO-FAO joint conference on food standards was held in October 1962 and the Commission has been functioning actively since then.

The work of the Codex Commission

is conducted largely by committees. These committees are established by the Commission and a country is named to function as chairman. Any government that is a member of WHO or FAO may send delegates to committee meetings. Representatives from 10 to 15 countries generally work on each committee.

The committees meet periodically throughout the year to consider all aspects of their commodities and decide on workable standards. Then, once a year, the Codex Alimentarius Commission meets at FAO headquarters in Rome to discuss their progress. Ultimately, draft standards of the various committees are voted upon by the participating countries. When a sufficient number of governments accept a draft standard, it is printed in the *Codex Alimentarius* as a formal standard. The *Codex Alimentarius* is the Commission's official bible—or food code.

Obviously, an elaborate procedure is followed from the decision to establish a Codex standard for a given commodity to the final adoption of the standard by the entire Commission. Every country participating in the work of the Codex Alimentarius Commission has a chance to speak up and offer recommendations to be incorporated in a Codex standard.

A Codex standard for a given commodity is essentially a standard of identity. That is, the standard describes and identifies the food, including its ingredients. Also considered are additives, residues, labeling, sampling and testing procedures, and requirements for hygiene, including protective measures and safeguards to assure a sound, wholesome, and marketable product. The Codex aim is to develop *minimum* standards covering the above factors and *not* to develop multiple quality grades.

After a Codex standard is approved and issued by the Commission, acceptance is up to the individual country.

No country, in other words, is duty-bound to accept a Codex standard for a given commodity.

Acceptance of a Codex standard, however, will help less-developed countries to obtain assistance and guidance in producing foods that will meet the minimum standards. On the other hand, to developed nations, like the United States, the work of the Commission offers the opportunity for simplifying and bringing into closer harmony regulations dealing with exporting and importing of different foods. In this way, the work of the Commission will help eliminate many of the trade barriers which impede the free flow of many foods.

The United States has given full support to, and participated actively in, the work of the Codex Alimentarius Commission. As a matter of course, the U.S. government and industry have sent representatives to take part in the work of almost all Codex committees and, in this way, has had an opportunity to use its experience to help in the establishment of workable definitive standards for various commodities.

The United States is chairman of three Codex committees, including Food Hygiene, Processed Fruits and Vegetables, and Poultry Meat. One of several government agencies working closely with the Codex Commission is the U.S. Department of Agriculture's Consumer and Marketing Service, because of its far-reaching activities in the fields of consumer protection and development of food standards.

The Codex Alimentarius Commission represents a new and vital influence in the realm of international trade. As standards for various commodities are adopted by the Commission, buyers and sellers everywhere will be provided with additional safeguards, a common language for trading, and a yardstick for determining value.



Federal-State grader places small glass cell containing tomato juice on the colorimeter, in order to measure the color index.

GRADING SERVICES Keep Pace With Space-Age Processing

By Donald S. Matheson and Fred Dunn

COLORIMETER, REFRACTOMETER, viscosimeter, comparator, hydrometer, micrometer, succulometer, tenderometer, salometer—such instruments are virtually unknown to consumers of agricultural products.

But to processors of foods and fibers, who provide consumers with the food they eat and the clothing they wear, these devices are now commonplace. And many have been incorporated into U.S. Department of Agriculture grading programs that are provided to processors on a fee-for-service basis.

The reason is simple. Rapid, dramatic strides in food and fiber technology, in processing techniques, and in marketing practices are demanding more accurate and more objective means of sorting and evaluating products according to quality.

Two large tomato processing firms in the Great Lakes region, for instance, are utilizing a new "electronic" tomato grading service that USDA's Consumer and Marketing Service now makes available to processors.

Key to the service is the tomato colorimeter, a photoelectric device that classifies tomato color many times more accurately than the human eye. When a grower's load of tomatoes is delivered to the plant, the Federal-State grader stationed there determines the percentage of usable tomatoes by examining a representative sample of them for defects. Then he extracts the raw juice from the tomatoes in the sample and employs the colorimeter for "reading" its exact color.

These grading results—the proportion

of usable tomatoes as judged by the grader on the basis of nationally uniform standards, and a color index as determined by the colorimeter—go together to represent the real value of the tomatoes to the processor. All growers contracting with the processor can thus be fairly and equitably paid according to the quality of tomatoes they deliver to the plant.

There are several "fringe benefits" to the system, too. The processor's field men, who are in contact with growers,

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can use the grading information to recommend the best time for harvesting, in order to get tomatoes that have the fewest possible number of defects and are at the most desirable stage of ripeness.

And the processor can use the color results for blending different lots of tomatoes to give the right flavor and eye appeal to each tomato product, whether it be catsup, puree, canned juice, soup, paste, or sauce.

The service has been so successful that five other processing firms began using it during the 1966 tomato season, which got underway in July, 1966.

All C&MS grading services—whether the commodities are tomatoes or other vegetables, or whether they are fruits, poultry, red meats, eggs, dairy products, grains, cotton, or tobacco—are in a rather constant state of change. Specialists

—employed by USDA and also by States that cooperate in providing many of the grading services—are constantly improving on the services to make them more responsive to the needs of an efficient, orderly, and changing marketing system.

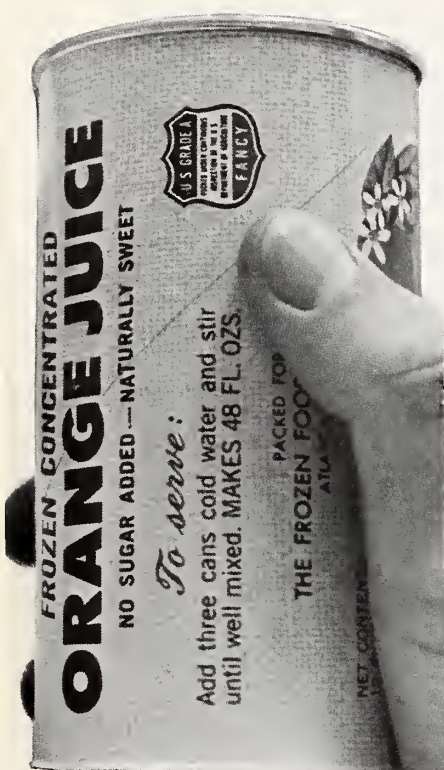
Some of the improvements actually are initiated by processors or packers, who are the major users of the Federal and Federal-State grading programs. Others are the result of research on the part of USDA and private industry.

Such improvement may mean more objective methods of determining quality—like the colorimeter for classifying tomato and cotton color; an electric meter for determining moisture in grains; a salometer for measuring the amount of salt in pickles; a tenderometer for measuring the maturity of peas; a micrometer for measuring fineness and maturity of cotton fibers; a refractometer for determining sweetness of cantaloupes, grapes, and honey; and a micrometer for measuring the height of egg whites.

Or, improvements may take the form of changes or additions to the standards, which are used by the graders as a basis for classifying the quality of products.

While changes are continually being made in the standards and grading procedures, their basic purpose remains substantially the same.

And that—at least so far as processors of farm products are concerned—is to classify each product according to its quality, and thus provide a reliable measure of its value and how it can be processed, marketed, and used to best advantage.



Behind the shield is a specialist who measures quality of farm products by USDA standards. Appearance is one factor.

BEHIND THE GRADE SHIELD

CONSUMERS ARE BECOMING increasingly quality-conscious and increasingly aware of the quality that's assured by the grade shield of the U.S. Department of Agriculture. But they don't see the man who stands behind the mark on the product they buy.

That man is the official grader, an employee of USDA's Consumer and Marketing Service or of a State department of agriculture, working cooperatively with C&MS.

Grading those foods that carry the USDA grade shield is only a small part of the grader's work. Most grading is done at the wholesale level where, unknown to most consumers, this behind-the-scenes marketing service helps to assure them of a dependable supply of reliable-quality foods.

Graders work in meat packing plants, laboratories, processing plants, wholesale houses, auction and terminal markets—any place where farm products are assembled in large lots. They sometimes work at unorthodox hours, in out-of-the-way places, and under hazardous conditions.

They grade meat, poultry, eggs, fruit, vegetables, dairy products, cotton, tobacco, grain—most of the food we eat and the fibers used in our clothes.

The grader who handles all this is a well-trained specialist. He may use scientific instruments (cover picture) in measuring the quality of farm products according to the criteria set forth in the official USDA grade standards. But often, as pictured here, he must rely upon highly developed senses of smell, taste, touch, and sight in making his decisions on how the product measures up.

Whether he uses a refractometer or a taste-test, the grader must make many decisions, quickly and accurately, over his working day—these decisions are relied upon by many people. Federal-State graders are unsung, but respected, experts on quality whose services help provide us all with better living.



Interior quality of eggs is judged by candling.



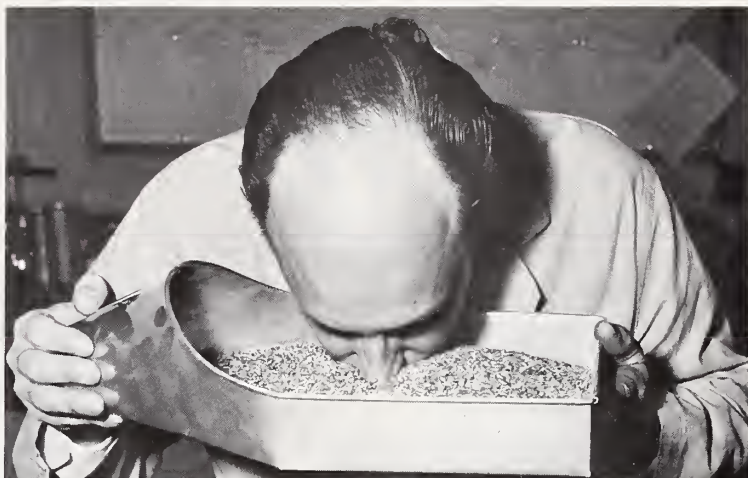
An experienced cotton classer judges the staple length in a cotton sample.



or in grading poultry.



Tobacco color and leaf structure are important.



This grain grader sniffs to detect off odors in a sample of wheat.

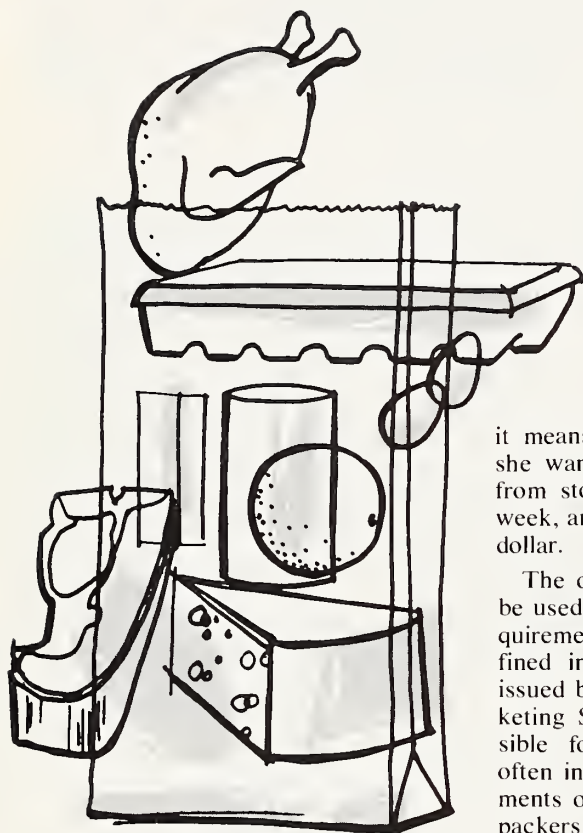


A butter grader determines flavor by taste and aroma.



A mechanical thumb indicates the ripeness of apples.

LET THE USDA Help You



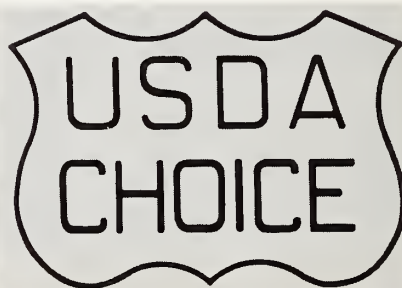
it means can use it to get the quality she wants to compare prices of foods from store to store and from week to week, and to get good value for her food dollar.

The official USDA grade shield may be used only on foods that meet the requirements for the grade stated, as defined in the standards developed and issued by USDA's Consumer and Marketing Service. C&MS also is responsible for supplying grading services, often in cooperation with State departments of agriculture, to processors and packers who want to have their products graded.

The use of U.S. grades for food is voluntary. The food processor, handler, or packer who requests the grading service must meet strict requirements for cleanliness and operating procedures to obtain it, and must pay a fee to cover the cost. Meat and poultry must first be inspected for wholesomeness before they may be graded.

Not all of the food that is graded appears in the grocery store carrying the USDA grade shield. Much of the grading is done at the wholesale level, and trading done on the basis of a grade certificate. But consumers still benefit because it enables grocery stores to provide them with foods of more reliable quality—more efficiently and thus more economically—than would otherwise be possible.

Here, for use as a shopping guide, are illustrations of the grade shields used on various foods, together with an explanation of what they mean in each case.



MEAT

A mark like this is stamped on meat that is federally graded. This is the grade you are most likely to see at meat counters. Several kinds of meat are graded—beef, lamb, veal, and calf—and this type of shield is used on all of them. Main grades of meat are *Prime*, *Choice*, and *Good*. There are lower grades, but you are not so likely to see them in the store. *Prime* meat is the highest quality. It's also the most expensive, and not widely available. *Choice* meat is quite tender and juicy and has a good flavor. Lower grades of meat, including *USDA Good*, although not as tender and juicy, can provide satisfaction when properly cooked.



POULTRY

This is the grade mark used on poultry. You are likely to find it on the wrap-

TODAY'S BUSY HOMEMAKER—and which one is not?—needs all the help she can get in shopping for food. The vast array of products lining the shelves of today's supermarket challenges the common sense, and buying sense, of even the most experienced shopper.

For many foods there is help available in the form of the USDA (U.S. Department of Agriculture) grade shield—a reliable guide to quality that means the same thing in all parts of the Nation. Foods that often carry this quality guide include beef, lamb, and veal; chickens, turkeys, and ducks; eggs, butter and cheddar cheese; some fruits and vegetables and related products.

The shopper who learns to recognize the USDA grade shield and knows what

Grade Shield

Shop for Food

per, or on a wing tag, on chickens, turkeys, and ducks. Although there are two lower grades of poultry (B and C) you will seldom see these grades printed on the poultry label. Poultry bearing the USDA Grade A shield is the finest quality. Birds of this grade are plump, have a high proportion of edible meat, and have a pleasing appearance. Lower grades of poultry are of good table quality but have less meat in proportion to bone and may have some appearance defects, including cuts or tears.



EGGS

This is the mark used on eggs. It is printed on the carton or on a tape used to seal the carton. It shows both the quality grade (AA or Fresh Fancy, A, or B) and the size (Jumbo, Extra Large, Large, Medium, Small, or Peewee) of the eggs. "Size" refers to the weight of a dozen eggs. There is a 3-ounce per dozen weight difference between sizes. The top two grades of eggs, AA and A, are best for frying and poaching. Grade B eggs, on the other hand, are just as good to eat but the white is thinner and the yolk may be flatter. Grade B eggs are best used where appearance is not a factor, such as in general cooking and baking.



DAIRY PRODUCTS

This is the USDA grade mark used on butter and cheddar cheese. U.S. Grade AA and A butter has a pleasing and delicate sweet flavor and is made from sweet cream. Grade B butter does not have quite as good a flavor as the top grades. Grade AA cheddar cheese has a desirable and consistent flavor, body, and texture, as appropriate for the type of cheese — sharp, mellow, or mild.



This shield may be used on cottage cheese, process cheese, sour cream, and buttermilk. It means that the product is of good quality and was manufactured in a clean plant, under USDA supervision.



FRUITS AND VEGETABLES

This is the grade mark used on canned, frozen and dried fruits and vegetables. The highest grade, U.S. Grade A, is of excellent table quality, appropriate for use in desserts, or salads, or as a special side dish, where appearance and texture are important. Grade B fruits and vegetables are not required to be as uniform in size and color as Grade A products, nor quite as tender or free from blemishes.



This grade mark may be found on fresh fruits and vegetables. The typical range of grades is U.S. Fancy, U.S. No. 1, and U.S. No. 2. For some products, there are grades above and below that range. For example, U.S. Extra Fancy is the top grade for apples. The grade shield may be used only on U.S. No. 1 or higher grades. The grades are based on the product's color, shape, maturity, and relative freedom from defects.



QUALITY FOR QUANTITY BUYERS

By Francis M. Lee

ABOUT TWO YEARS AGO Mrs. Adelaide Neily, director of the Fairfax, Va., school lunch program, grew tired of spending valuable time haggling with suppliers over meat prices, size of portions, and the quality of the meat itself. She began to look for a more economical and business-like way of operation . . . and found it in the Acceptance Service offered by the Consumer and Marketing Service of the U.S. Department of Agriculture.

"This service," she said, "is worth far more than its cost. It's the only way to be sure of getting what you specify."

The Acceptance Service is a good way for volume feeders to buy in quantity and still get the quality they want. It also helps save time and money.

Many volume buyers, whether restaurant managers or school lunch directors, are not experts on quality for all foods. And unless the operation is large enough, institutional feeders cannot afford to hire special "quality experts."

But through use of the Acceptance Service, volume buyers can get the help of Government graders and inspectors—each an expert on his particular product—to assure the quality of the food they buy.

Volume buyers can use the Acceptance Service to purchase fresh and processed fruits and vegetables, meats and meat products, poultry, eggs, dairy products, and some grain products and related commodities such as wheat flour, cornmeal, salad oil, dry edible beans, dry peas, and milled rice.

The operation of the program varies slightly with the commodity, but essentially this is how it works: The food buyer knows what products he needs, what quantity, and what size. He also has an idea of the quality which will best serve the needs of his program.

The buyer contacts a representative of C&MS and discusses the product requirements with him. The C&MS food expert helps the buyer translate his needs into clear, precise specifications.

In some cases USDA already has detailed specifications. For instance, there are "specs" for more than 300 fresh, cured and processed meat and meat products covering such items as hams, chuck rolls, pork loins, and portion-cut meats.

The specifications tell how the food is to be prepared, weight average, state of refrigeration, quality grade, degree of trim, size, condition, etc. C&MS personnel can offer USDA-approved specifications to meet the needs of the buyer.

Once the specifications have been set up, the buyer can give his contract to a single supplier, or call for bids from several suppliers.

In either case, a C&MS grader or inspector examines the food before delivery to make sure it meets the specifications the buyer has set up. If it does, he stamps and seals each food item or package with an official seal. The stamp and seal are the buyer's assurance that he is getting exactly what his specifications called for.

The Acceptance Service is used by a variety of volume buyers—steamship lines, airlines, schools, restaurants, hospitals, and other institutional feeders—for both its money-saving and quality-assuring advantages.

Officials of the New York City school system say, "Your acceptance service does an A-Number-One job in helping us with our problems. It's been a good investment for us."

Use of the Acceptance Service makes daily trips to the suppliers a thing of the past. And there are no more time-consuming and costly delays.

The cost of the service may be paid by either the supplier or the buyer. Usually it is paid by the supplier who uses the services of a Federal grader in his plant. This cost, which is nominal (except in the case of out-of-the-way locations or very small quantities), may add slightly to the apparent price of the product—but it is offset by the money-saving advantages of the service.

Many volume buyers find that with exact amounts known and purchased, over-stocking and spoilage are minimized and portion costs go down.

For all of these reasons, thousands of volume buyers throughout the country are finding the Acceptance Service an easier, more economical, more business-like way of handling purchasing problems.

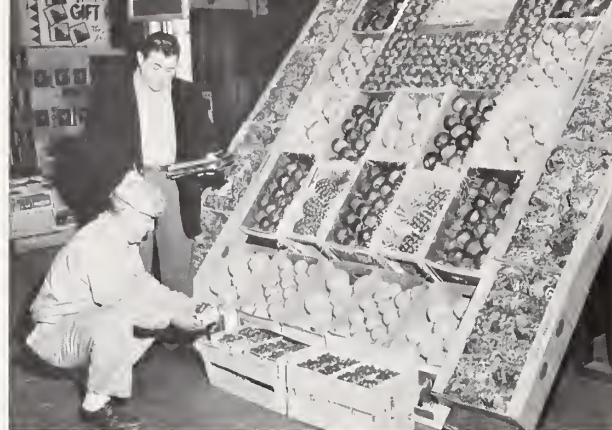
The feelings of most satisfied users are summed up by an official from a well-known steamship line which uses the service, "it offers an almost ironclad guarantee that we'll get only those foods which meet our specifications. Having your people, who are specialists in each particular food line, is very reassuring to us."

The divisions providing this service include: Dairy Division, Fruit and Vegetable Division, Grain Division, Livestock Division, and Poultry Division.

The author is Chief of the Meat Grading Branch, Livestock Div., C&MS, USDA.

WHY THEY USE THE GRADING SERVICE

By Harold E. Meister



A producer's fruit display at a wholesale market. Grading serves producers—poultry, egg, meat, dairy, and fruit and vegetable—by making it possible for buyers to pay them on the basis of quality.

IN NEBRASKA, A SMALL MEAT packer confides that his business could not survive without the meat grading service of the U.S. Department of Agriculture.

In Mississippi, an egg packer says that the Federal-State Quality Control egg grading program is "a helpful sales tool in interesting and selling the major buyers."

The author is Chief, Grading and Inspection Branch, Dairy Division, Consumer and Marketing Service.

In Iowa, the manager of a large cooperative creamery reports that USDA's dairy grading and quality control service is "the heart of our business—the yardstick by which we run the organization."

In the New York City wholesale market, demand for grading service on fresh fruits and vegetables is so great that the supply of government graders runs short and they sometimes must work around the clock to get the job done.

All across the country, people in the poultry, egg, meat, dairy, and fruit and vegetable business give enthusiastic endorsement to the Federal-State grading service administered by USDA's Consumer and Marketing Service.

The reasons they do so are not hard to find. Says one user, simply, "The grading service saves us money." He adds that when you can transact business on the basis of a grader's certificate and avoid the necessity for personal inspection of products, the savings in time and travel alone are considerable.

Since Federal-State grading services are offered on a voluntary, fee-for-service basis, it is obvious that they will be used only if they prove worth their cost.

Many users testify that they save more than the cost of grading services through economies in operation and

marketing. A Philadelphia fruit and vegetable packer wrote that the grader stationed in his plant "has made many suggestions for improving our equipment . . . to reduce bruising and to improve the package."

In addition, he pointed out how the grading service preserves the integrity of his pack and builds the quality image of his brand. "The constant supervision of the USDA grader," he said, "eliminates the human tendency on the part of your own employees to grade easier when produce is expensive. The Government grader is not concerned with the market. Therefore, your quality pack withstands the pressure of market conditions."

Grading serves producers—not only by making it possible for buyers to pay them on the basis of quality—but also by guiding them on what qualities they should produce to meet consumer demands.

In 1926, a group of producers known as the Better Beef Association, met in Kansas City to petition the Government for obtaining standardized impartial grades to reflect consumer preferences back to the producers.

Consumers, for instance, show a preference for U.S. Choice beef. So producers have selected their feeder stock and geared their feeding programs to produce that quality—to the extent that today about 75 percent of the officially graded beef receives the USDA Choice stamp.

The overall result has been an increase in the volume of quality beef offered to consumers in this country—the long-range effect that can be expected from most grading.

In California, a large grocery chain recently started selling USDA Grade AA cheddar cheese. An official of the company wrote, "In my estimation this is the finest cheese we have used, not only flavor-wise but also in block size and texture. The USDA . . . grading

program should be commended for their part in accomplishing . . . this product."

A New England dairy manufacturer has said "the USDA grades and grading services have been a factor in raising the standards of dairy products throughout the industry, regardless of whether a company uses them. Firms not using the service have to upgrade their products to meet the competition of the products that are graded."

Of significance to many small operators is the fact that the grading service enables them to compete with large firms and to sell directly to retailers and distributors who are interested in uniform quality products. The USDA grade mark permits smaller operators to sell in a larger than local or regional market and to compete favorably with nationally advertised brand names.

Some observers have pointed out the healthy effect of the grading service upon competition. "It tends to shift competition. 'It tends to shift competition to the basis of price,'" says one economist, "and thus puts more emphasis on cost reduction. New technology and new methods, accordingly, receive added attention. Effects upon industry structure, progress, and development may be among the more important of the economic impacts of grades and grading."

Retailers, as might be expected, are among the most enthusiastic boosters of the Federal-State grading services. A Washington, D.C., firm recently used a full-page newspaper ad to "salute the U.S. Department of Agriculture's quality control programs which protect and aid the American Homemaker in her selection of food."

Most food store advertisements today feature one or more USDA graded products.

Why are the grading services so popular? It could just be as simple as the way one user put it, "Grading has increased our business."

CONSUMER AND MARKETING BRIEFS

Selected short items on C&MS activities in consumer protection, marketing services, market regulation, and consumer food programs.

N.Y. COTTON EXCHANGE REFINES "MIKE" REQUIREMENTS FOR N.Y. FUTURES CONTRACTS

Recent action of the New York Cotton Exchange emphasizes the effect and acceptance of micronaire readings as an important factor in the marketing and pricing of cotton.

The exchange now requires cotton tenderable on New York futures contracts to have micronaire readings between 3.5 and 5.2—a refinement of an earlier requirement that cotton had to mike 3.5 or higher for futures contracts.

The new requirement will assure that cotton delivered will be neither too fine nor too coarse. The micronaire test measures fineness and maturity of cotton fibers—the lower the reading, the finer the fiber. If fibers are too fine they are susceptible to tangling, and if too coarse they tend to be weak.

This past June, micronaire readings became an additional quality factor in official U.S. Cotton Standards, issued by USDA's Consumer and Marketing Service and used by C&MS in classing cotton.

FOOD PROCESSING PLANT MANAGER PRAISES COURAGEOUS ACTION OF C&MS INSPECTOR

An explosion, which could have killed or injured several people and caused considerable property loss, was recently prevented by the quick thinking and courageous action of a U.S. Department of Agriculture inspector of processed fruits and vegetables.

The inspector, William L. Best, is with USDA's Consumer and Marketing Service, stationed in a potato processing plant in Washington State.

When fire engulfed a fork lift truck at the plant, Best daringly crawled alongside the vehicle and extinguished the flame by turning off the valve to the butane tank. Best was cited by the plant manager, on behalf of the corporation that operates the processing plant, for his "alert and courageous action . . . which prevented a real disaster."

Best's less hazardous duties consist of inspecting frozen french fries and advising the plant on the quality of the product packed under USDA's continuous inspection service that's offered to food processors.

CODEX ALIMENTARIUS COMMITTEE DRAFTS WORLD STANDARDS FOR EDIBLE FATS AND OILS

International standards to facilitate world trade in edible fats and oils are progressing toward reality under the aegis of a United Nations commission.

Drafts of standards for 12 refined fats and oils were prepared in London last spring by the Codex Alimentarius Commission's committee on fats and oils. These standards will be submitted to interested governments for comment. This, the committee's third meeting, was devoted to standards for refined fats and oils for direct human consumption. Standards for crude fats and oils were developed during the first two meetings.

In addition, the Committee prepared a more advanced draft of a standard for margarine, and gave preliminary consideration to standards for "cooking fats" and olive oil.

Dr. Lawrence Zeleny, of USDA's Consumer and Marketing Service, is the United States representative on the Codex Fats and Oils Committee.

COOKS GET HEAD START TOO

Cooks in the Head Start program for the District of Columbia recently got a head start on learning about meat and Federal grades.

Sandra Brookover, consumer meat specialist with the Livestock Division of USDA's Consumer and Marketing Service, presented a special program explaining Federal meat grades and their use to a group of women who will be cooks for the program.

Her presentation also included tips on meat selection and identification of retail cuts.

C&MS RELEASES THREE-MINUTE FOOD FILM

"Good Eating Ahead!"

That's the title of a new 3-minute color, sound film that tells consumers the story of the U.S. Department of Agriculture's continuous inspection service to assure the wholesomeness and quality of frozen, canned, and dried vegetables and fruits.

The film was produced by USDA's Consumer and Marketing Service, for television showing.

Freshly picked vegetables are followed all the way through a food processing plant, till they are packaged. And C&MS inspectors are shown on the job in the plant—keeping a watchful eye on all steps of processing, making sure the end product is wholesome and meets quality standards.

The film displays the shield-shaped USDA grade and inspection emblems, that give consumers a recognizable assurance that the food bearing these marks has been packed under USDA continuous inspection.

Requests for loan of the 16 mm film may be made to: Information Division, Consumer and Marketing Service, U.S. Department of Agriculture, Washington, D.C. 20250.

FISCAL '65-'66 SETS RECORD FOR GRAIN EXPORTS

A record 2,073 million bushels of grain were exported in the 1965-66 fiscal year ending June 30. This is about 500 million bushels, or 31 per cent, more than was exported in each of the two previous record years.

These figures are on the basis of inspections for export performed under the supervision of the Grain Division of the Consumer and Marketing Service, and they do not include wheat flour or other grain products.

C&MS inspections for export also reveal that corn exports were up 28 per cent over the previous year—to a record 668 million bushels—more than twice what they were in 1963-64. Grain sorghum exports of 236 million bushels nearly doubled over the last fiscal year, while soybean exports of 258 million increased 22 per cent.

PLENTIFUL FOODS FOR OCTOBER

October's brightening colors of landscape will be reflected in an array of plentiful foods for thrift-minded housewives. The Consumer and Marketing Service's October list includes apples, pears, grapes, broiler-fryers, pork, dry beans and rice.

This is the first month in a long time that pork has made the plentiful foods list, with a larger supply expected for October markets.

October will see all varieties of apples from the year's harvest, and the apple industry has scheduled October 13-22 as National Apple Week. The largest Bartlett pear crop on record will come from the Pacific Coast States. And the California grape crop is second only to the size of the 1965 output.

Always-popular broiler-fryers will be plentiful, too, along with a record rice crop, and a larger dry bean crop than last year.

MORE BROILERS ARE NOW TRAY-PACKED AT THE PLANT

Most consumers are well-acquainted with the convenience of purchasing broilers that have been weighed, priced, and tray-wrapped right in the store. An increasing number of broilers, however, are being tray-packed directly in plants operating under inspection by the Poultry Division of USDA's Consumer and Marketing Service. A recent trade survey reveals that the volume of broilers tray-packed in USDA-inspected plants should more than quadruple by 1970. This trend will help provide consumers with a more uniform product, packed under USDA inspection all the way through to the consumer package. Poultry products packaged under USDA inspection must meet not only wholesomeness but also labeling requirements.

WHEAT SEDIMENTATION TEST GAINS INTERNATIONAL FAVOR

International recognition and adoption of the wheat sedimentation test, developed by USDA's Consumer and Marketing Service, has greatly increased during the last two years. This is what the Fourth International Cereal and Bread Congress learned when they met last spring in Vienna, Austria.

It was reported that France has adopted the test for wheat breeding

use; that it is now used almost universally in West Germany by both wheat breeders and users; and that it is used in all of Israel's wheat breeding programs. Until recently Soviet scientists considered it to be of relatively little value. Now, however, the test is being used widely by both Soviet wheat breeders and flour mills. A proposal to adopt the test in Bulgaria is being considered. In addition, the test is widely used in both wheat breeding and milling operations in Belgium, the Netherlands, Greece, Turkey; and in breeding work in Switzerland, Sweden, and Austria.

GROWERS ADD ADVERTISING FEATURE TO TWO MARKETING ORDERS

Paid advertising and sales promotion activities are now authorized under two Federal fruit marketing order programs, as a result of actions by growers of the commodities covered.

California nectarine growers amended their program on June 10 to provide for this new feature of Federal marketing agreements and orders. Growers of oranges and grapefruit in the Lower Rio Grande Valley of Texas amended their program on August 29. Both actions followed grower referendums, as well as approval from handlers of these fruits.

Officials of the Consumer and Marketing Service—the U.S. Department of Agriculture agency which assists industries in developing marketing orders and keeping them currently useful as marketing practices change—report that the California nectarine and Texas citrus fruit industries are the first to take advantage of the advertising and sales promotion feature. Authority for this new feature in Federal marketing orders covering 15 specified commodities is now possible as a result of legislation recently passed by Congress. The 15 commodities are: nectarines, citrus fruits, cherries, carrots, onions, Tokay grapes, fresh pears, dates, plums, celery, sweet corn, limes, olives, pecans, and avocados.

U.S. MAY BECOME WORLD'S NO. 1 RICE EXPORTER

The United States, with rice exports expected to exceed 1.5 million metric tons during the 1966-67 marketing year, may become the world's leading rice exporter.

In this event, the Grain Division of USDA's Consumer and Marketing Service will have more work to do. All rice exported from the United States is inspected for grade and milling quality under the supervision of the C&MS Grain Division.

In the 1965-66 marketing year, Thailand led the world with rice exports of about 1.9 million metric tons, with Burma and the United States close behind.

CONSUMER MARKETING

The need for grading and for certifying grades to consumers in present-day marketing was spelled out graphically in an issue of the Pennsylvania Farmer.

Here, with the permission of the editor, are excerpts from the editorial, "Consumer Marketing."

"Frankly, we are greatly concerned with Pennsylvania grower progress in large volume marketing of farm products certified to the consumer. Among our many fine Pennsylvania products there is only one that is so certified and this is eggs . . .

"Some growers are doing a terrific job of guaranteeing quality to the consumer. They identify their packs to the consumer and are answerable to them, so they realize they must be ruthless in maintaining quality or lose their market and their price advantage.

"We are convinced that one of the crying needs of Pennsylvania agriculture is more products certified to the consumer, such as our egg program . . . Our growers still think primarily of production when they should be giving much more time to figuring marketing angles. Too few of our growers realize that a certified product is the only way to obtain the best prices and to maintain steady demand in the food shopping centers.

"The first fundamental of a certified program is that the producer cannot be his own inspector. Consumers want the assurance that comes from independent inspection because it is a guarantee of quality.

"Our growers will have to work together as they never have before to police themselves and the first step is to subject their product to independent inspection. Producers can be their own worst enemies by letting a poor product go to market under false colors."

OFFICIAL BUSINESS



Hugh Downs, Moderator

TV PERSONALITY HUGH DOWNS will be host and moderator of a television special, *The National Food Buyers Quiz* to be programmed at 8 p.m., November 17, on educational television stations coast-to-coast.

The National Food Buyers Quiz will give the viewing audience a chance to rate their food-buying ability against a panel of show-business personalities and against a sample of Americans who have taken the quiz in advance. Viewers will be able to answer the question, "How good a food shopper am I?"

The questions will deal with decisions faced by the average food shopper in the grocery store. Viewers will be quizzed on their knowledge of fresh fruits and vegetables, cuts and grades of meat, labels and what they mean.

The program is being produced by WETA-TV, Washington, D.C. with the assistance of the U.S. Department of Agriculture's Consumer and Marketing Service.

Clip and save for TV "Special" Thursday, Nov. 17, 8 p.m. on Educational TV coast-to-coast.

Official Answer Sheet NATIONAL FOOD BUYERS QUIZ

(Circle correct answer)

1	True False	18	a b c d
2	True False	19	a b c
3	True False	20	a b c
4	True False	21	a b c d
5	True False	22	a b c
6	True False	23	a b c
7	a b c d	24	a b c d
8	True False	25	a b c
9	True False	26	a b c
10	True False	27	True False
11	True False	28	a b c d
12	True False	29	True False
13	True False	30	a b c
14	True False	31	True False
15	True False	32	True False
16	True False	33	a b c
17	True False		

SCORE:	RATING:
Over 30 correct answers	Excellent
27 - 30 correct answers	Good
23 - 26 correct answers	Fair
Under 23 correct answers	Let someone else do your food shopping

For Free Copies of:

- TIPS ON SELECTING FRUITS AND VEGETABLES (MB-13)
- HOW TO USE USDA GRADES IN BUYING FOOD (PA-708)
- QUESTIONS AND ANSWERS USED IN NATIONAL FOOD BUYERS QUIZ (C&MS-51)

Write to:

FOOD QUIZ
Washington, D. C.
20250

Produced by WETA/Channel 26, Washington, D.C. with the assistance of the
U.S. Department of Agriculture, Consumer and Marketing Service.